

BOTANICAL MUSEUM LEAFLETS

HARVARD UNIVERSITY

CAMBRIDGE, MASSACHUSETTS, MAY 15, 1953

VOL. 16, No. 3

STUDIES ON PERUVIAN PLEUROTHALLIS

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THE following notes on *Pleurothallis* in Peru include two new species and six new varieties, as well as other nomenclatural discussions.

***Pleurothallis angustipetala* C. Schweinfurth sp. nov.**

Herba mediocris, epiphytica, cum rhizomate repent. Caules graciles, unifoliati, vaginis pluribus ornati. Folium breviter petiolatum; lamina oblongo-elliptica, obtusa vel acuta, basi cuneata. Inflorescentia unica, folio multo longior, supra subdense multiflora. Flores minores, secundi, cum segmentis patentibus. Sepala similia, lanceolata vel anguste lanceolata, supra longe angustata, lateralia leviter recurva. Petala circiter duplo breviora, linearia, acuta. Labellum petalis paulo longius, lateraliter visum sigmoideum, pandurato-oblongum, obtusum vel subacutum; pars basalis carinis binis humilibus ornata; pars anterior paulo major, oblongo-ovata. Columna parva, cum ala terminali tridentata.

Plant medium-sized, epiphytic, slender. Rhizome creeping, concealed by blackish sheaths. Roots fibrous, glabrous. Stems apparently in pairs, slender, about 4–11 cm. long, unifoliate, bearing three or four close, tubular sheaths, the uppermost being longest and commonly separated. Leaf petioled, up to 7.2 cm. long; lamina

oblong-elliptic, acute or obtuse, cuneate below, up to 6.5 cm. long and 1.8 cm. wide. Inflorescence solitary, nearly twice as long as the leaf, about 12.2 cm. or less long, suberect, densely or subdensely many-flowered above, looser below. Flowers commonly secund, rather small, yellow-green, with spreading segments. Sepals minutely cellular-papillose within. Dorsal sepal narrowly lanceolate, long-narrowed to an acute apex, concave below, up to 9.8 mm. long and 2.6 mm. wide near the base. Lateral sepals lanceolate, oblique and gently recurved above, up to 9.9 mm. long and 2.9 mm. wide. Petals much smaller than the sepals, linear, acute, prominently 1-nerved throughout, about 4.6 mm. long, up to 1 mm. wide. Lip somewhat longer than the petals, sigmoid when viewed from the side in natural position, pandurate-oblong, about 5.9 mm. long when expanded, up to 2.1 mm. wide above the middle, obtuse or subacute; basal portion very shortly clawed, subquadrate-oblong, with a pair of low keels that extend onto the basal part of the anterior portion; anterior portion slightly longer and broader, oblong-ovate. Column small, shorter than the petals, about 3 mm. long, narrowly winged on each side, with a short trilobulate wing at the apex, produced into a short foot.

This species superficially resembles *Pleurothallis rubens* Lindl., but commonly shows a creeping rhizome producing stems in pairs, has very narrow petals and a lip which differs in several details.

Cuzco: Prov. of Paucartambo, Pillahuata, at 2800 meters altitude, epiphyte, January 25, 1945, *C. Vargas 4956* (TYPE in Herb. Ames No. 65385); Same locality, at 3200 meters altitude, epiphytic in rain forest, "ceja de montaña," December 11, 1942, *C. Vargas 3006a*.

***Pleurothallis ciliata* Knowl. & Westc. var. abbreviata C. Schweinfurth var. nov.**

Herba variabilis, inflorescentiis abbreviatis et floribus

extus dense pubescentibus et labelli basi cum lobulis parvis dentiformibus a specie differt.

Plant epiphytic, medium-sized to large, apparently with a creeping rhizome. Stems unifoliate, 6–27 cm. long, with two or three close, tubular, evanescent sheaths near the base. Leaf erect, oblong-elliptic, subacute, cuneate at the sessile base, 9–14 cm. long, up to 3.5 cm. wide. Inflorescences one or two (perhaps more), abbreviated, nodding, densely few-flowered. Flowers small, finely short-pubescent without, bilabiate, brownish yellow somewhat “striped with darker brown-yellow.” Dorsal sepal narrowly oblong-lanceolate, acute and mucronate, up to 9.4 mm. long and 2.2 mm. wide, 3- to 5-nerved. Lateral sepals connate into an elliptic-lanceolate, sharply bidentate lamina which is about as long as the dorsal sepal but nearly twice as wide. Petals much smaller than the sepals, elliptic-lanceolate, short-acuminate, serrate above, about 4 mm. long and 1.2 mm. wide near the middle. Lip smaller than the petals, lightly arcuate below, ovate-oblong, rounded at the apex, trilobulate above the cuneate base with a pair of small, erect, dentiform, obtuse lateral lobes, bicarinate through the middle, about 2.2 mm. long. Column about as long as the lip, abruptly dilated above.

This variety of a widespread species is commonly distinctly larger than the type and has very short inflorescences. Moreover, the flowers are densely pubescent without, and the lip has short but distinct lateral lobules.

HUANUCO: Yanano, at about 1800 meters altitude, on mossy tree, May 13–16, 1923, *J. Francis Macbride* 3837 (TYPE in Herb. Ames No. 37529).

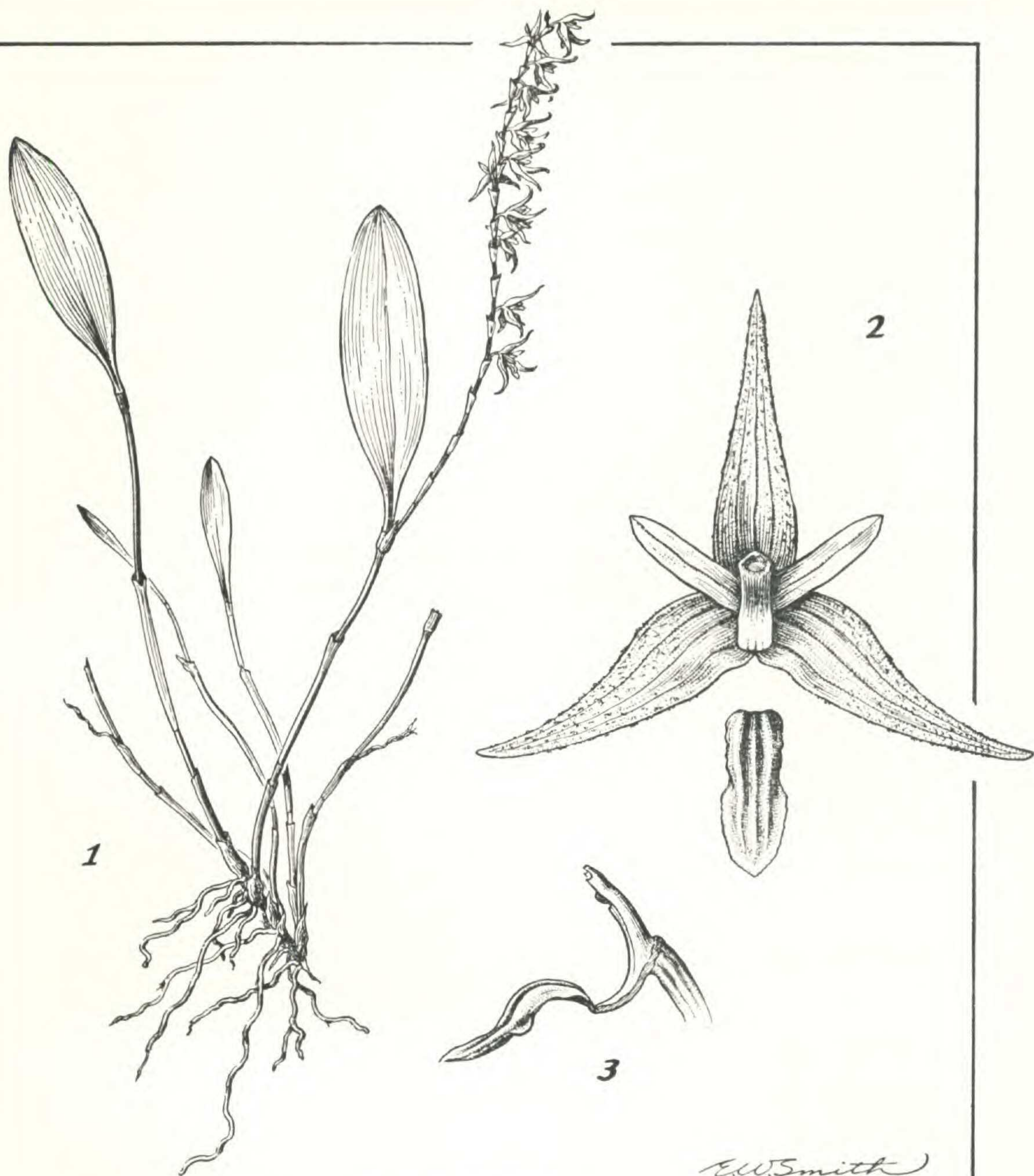
JUNÍN: Chanchamayo Valley, at 1200 meters altitude, September 1930, *Carlos Schunke* 1127 (whole plant very small).

***Pleurothallis ciliata* Knowl. & Westc. var. *elongata* C. Schweinfurth var. nov.**

EXPLANATION OF THE ILLUSTRATION

PLATE V. *PLEUROTHALLIS ANGUSTIPETALA* *C. Schweinfurth.* 1, plant, one half natural size. 2, flower expanded, three and one half times natural size. 3, column and lip from side, natural position, three and one half times natural size.

Drawn by ELMER W. SMITH



PLEUROTHALLIS

angustipetala

C. Schweinf.

Herba mediocris, inflorescentiis folio multo longioribus et petalis caudatis a specie differt.

Plant epiphytic, with a creeping rhizome. Stems slender, unifoliate, 5–8 cm. long, with two close, tubular, evanescent sheaths below, about 1 cm. or more apart. Leaf erect, oblong-elliptic to oblong-ob lanceolate, acute, cuneate at the sessile base, up to 7.7 cm. long and 2 cm. wide. Inflorescences one or two, much exceeding the leaf, arcuate to lax, loosely several-flowered above, up to about 18 cm. long. Flowers rather small, bilabiate, greenish yellow striped with red-brown, glabrous. Dorsal sepal narrowly lanceolate-oblong, acute and apiculate, about 14 mm. long and 2.8 mm. wide. Lateral sepals connate into a broadly oblong, apically bidentate lamina which is about as long as the dorsal sepal but twice as broad. Petals much smaller than the sepals, oblong-lanceolate, lacerate-dentate above the base (especially on the anterior margin), long-caudate above, about 7 mm. long. Lip shortly clawed, about 4 mm. long, lightly recurved below; lamina oblong-ovate, obtuse, subtruncate at base, erose-denticulate, with a pair of remote obscure carinate thickenings below, about 2 mm. wide; claw short, with a fleshy U-shaped callus. Column small, arcuate, wing-dilated above, about 3 mm. high at the back.

This concept differs from the variable *Pleurothallis ciliata* in having the inflorescences much surpassing the leaf and in having the petals long-caudate.

LORETO: Vicinity of Iquitos, at 100 meters altitude, on living tree in clearing, November to December 1936, G. Klug 10013 (TYPE in Herb. Ames No. 60889).

***Pleurothallis excisa* C. Schreinfurth sp. nov.**

Herba major, epiphytica, caespitosa. Caules approximati, unifoliati, vaginis pluribus tubulatis ornati. Folium breviter petiolatum, erectum; lamina oblongo-elliptica, apice obtusa, basi cuneata. Inflorescentiae saepissime

unicae, folium multo superantes, supra dense multiflorae. Flores secundi, aurei. Sepala similia, lineari-lanceolata, longe acuminata, tubulari-concava, lateralia valde obliqua, quam sepalum dorsale latiora. Petala multo minora, oblique oblonga, apice rotundata vel subtruncata. Label-
lum petalis paulo majus, pandurato-oblongum, dimidio basali subelliptico cum carinis binis conspicuis percurso, dimidio apicali ovato-elliptico, exciso. Columna parva, gracilis, arcuata.

Plant rather large, epiphytic, up to about 30 cm. or more tall. Roots fibrous, numerous, elongate, glabrous. Stems approximate, unifoliate, up to 15.3 cm. long, provided with three or four close, tubular sheaths of which the uppermost is separated and elongate. Leaf short-petioled, up to 10.2 cm. long; lamina oblong-elliptic, minutely apiculate at the obtuse apex, cuneate at the base, up to 9 cm. long and 2.5 cm. wide, coriaceous. Inflorescences one or two, much surpassing the leaf, many-flowered, dense above, loose below, 17–18.7 cm. long, erect or spreading, in the axil of a small conduplicate spathe up to 11 mm. long. Flowers secund, yellow, medium-sized, with spreading segments. Sepals similar, narrow, long-acuminate, tubular-concave. Dorsal sepal linear-lanceolate, about 12 mm. long and 2.8 mm. wide near the base when expanded. Lateral sepals lanceolate, very oblique below, about as long as the dorsal sepal, 2.9 mm. wide, long-decurrent on the column-foot. Petals much smaller than the sepals, obliquely oblong, rounded or subtruncate at the apex, about 4.6 mm. long and 1.8 mm. wide. Lip slightly larger than the petals, pandurate-oblong, abruptly recurved at the base, about 5.6 mm. long; basal half subelliptic, traversed by a pair of high fleshy keels; anterior half elliptic-ovate, bidentate at the apex, concave. Column small, slender, arcuate, extended into a long ligulate apical wing which is incurved at the

EXPLANATION OF THE ILLUSTRATION

PLATE VI. *PLEUROTHALLIS EXCISA* C. Schweinfurth.
1, plants, one half natural size. 2, flower expanded,
three times natural size. 3, column and lip
from side, natural position, three times natural size.

Drawn by ELMER W. SMITH



tip, about 5.5 mm. high including the wing, prolonged into a prominent curved foot.

Among the South American species, this plant recalls *Pleurothallis rubens* Lindl., but has a dissimilar lip. It appears to be more closely allied to the Central American *P. dolichopus* Schltr., but is unique in having an excised lip.

Cuzco: Prov. of Paucartambo, Pillahuata, at 3200 meters altitude, epiphytic in rain forest, "ceja de montaña," December 11, 1942, C. Vargas 3006 (TYPE in Herb. Ames No. 65388).

***Pleurothallis fimbrilabia* C. Schweinfurth nom. nov.**

Restrepia ecuadorensis Rolfe in Kew Bull. (1892) 138, non *Pleurothallis ecuadorensis* Schltr.

Plant rather small, epiphytic, with a creeping rhizome. Stems approximate, slender, several-jointed, about 4–10 cm. high, entirely or mostly concealed by several (up to 7) sheaths which are loose, tubular, scarious and finely red-purple maculate (the upper ones maculate only at their base). Leaf solitary, erect, oblong-elliptic to oval, obtuse or acute, cuneate at the sessile base, up to 6 cm. long and 2.9 cm. wide. Inflorescences fascicled, one to several, 1-flowered, issuing from the uppermost sheath just below the leaf, with the pedicel about 5 cm. long. Flower rather large for the genus, bilabiate, membranaceous. Dorsal sepal linear-lanceolate, about 2.2 cm. long, from a concave oblong-lanceolate lower portion gradually narrowed to a filiform apex which is clavate-thickened near the tip. Lateral sepals connate into an elliptic-oblong bidentate lamina which is subequally long with the dorsal sepal but more than twice as wide. Petals similar to the dorsal sepal but much smaller, the oblong-lanceolate lower portion sometimes with a more or less distinct appressed tooth. Lip about 9 mm. long, abruptly dilated from a small claw into a relatively broad suborbicular

basal portion provided on each side with a slender setiform lobule, then contracted into a linear-oblong, sharply bidentate lamina which is erose-fimbriate and muriculate through the center. Column slender, clavate above, about half as long as the lip.

This description is mostly based on the Peruvian collection cited below which differs in some respects from Rolfe's Ecuadorian material. The dorsal sepal and petals are slightly shorter. The sepals and petals are noted as translucent white lined with red or maroon, the lateral sepals being yellow thickly spotted with maroon or dark red. Since we consider that the concept *Restrepia* HBK. is referable to the variable genus *Pleurothallis* R.Br., I have made the above transfer. A new specific epithet is necessary, since the name *Pleurothallis ecuadorensis* was given to another species by Schlechter in 1915.

HUANUCO: Muña, at about 2100 meters altitude, in dense forest, *J. Francis Macbride 4018*.

***Pleurothallis floribunda* Poeppig & Endlicher**
Nov. Gen. ac Sp. 1 (1836) 48, t. 84.

Pleurothallis macrophylla HBK. sensu Lindley in Bot. Reg. 28 (1842) Misc. p. 74, no. 44; Fol. Orch. *Pleurothallis* (1859) p. 3, no. 2.

Pleurothallis macrophylla HBK. sensu Cogniaux in Martius Fl. Bras. 3, pt. 4 (1896) 396.

Several authors of note, especially John Lindley and Alfred Cogniaux, have treated *Pleurothallis floribunda* Poepp. & Endl. as referable to the older ***P. macrophylla* HBK.** However, a careful consideration of the available evidence, including a photograph of *P. macrophylla* from the Muséum d'Histoire Naturelle at Paris, has convinced me that the two concepts are amply distinct. The differences are shown in the following table.

P. floribunda

Leaf distinctly petioled

Flowers subsessile

Lateral sepals free to the base

Petals half as long as the sepals,
1-nerved

Lip subrotund in the middle and
narrowed toward the base and
apex, concave, scarcely shorter
than the petals

Habitat: Peru

P. macrophylla

Leaf sessile

Flowers with a rather elongate
slender pedicel

Lateral sepals connate up to the
apex

Petals a little shorter than the
sepals, 3-nerved

Lip ligulate with revolute mar-
gins, a little shorter than the
sepals

Habitat: Colombia

***Pleurothallis juninensis* Schltr. var. *subaequi-
sepala* C. Schweinfurth var. nov.**

Herba foliis magis oblongis acutis et sepalis subaequilatis et sepalo dorsali ovato vel ovato-lanceolato a specie differt.

Plant large, caespitose, up to 37 cm. tall from the base of the stem to the tip of an erect leaf. Stems 14–27.5 cm. long, often stouter than in the type. Leaf ovate-oblong or elliptic-oblong, erect or widely spreading, shortly cordate at base, acute or short-acuminate at the apex, 10–11 cm. long, up to 3.5 cm. wide. Flowers bilabiate, brown or reddish. Dorsal sepal oblong-ovate or ovate-lanceolate, acute or acuminate, about 9.5–16 mm. long, up to 5.4 mm. wide. Lateral sepals connate into an oblong-ovate or oblong-lanceolate lamina which is subequally long with the dorsal sepal and slightly narrower, acute or acuminate. Petals similar to those of the type. Lip similar to the typical form, oblong, rounded and minutely apiculate at the apex, scabrous, 5.1–6.1 mm. long.

This variety differs from the type in having the leaves broadest near or at the middle and especially in having the sepals more ovate or ovate-lanceolate with the dorsal